

Interagency Site Transfer Form  
For UST inspections at new Trust Land Properties  
Between US EPA and WA State Dept. of Ecology  
July 14, 2014

This is a checklist to standardize site jurisdiction transfers for Trust Lands owned by Native American Indian Nations from the State to Federal. This agreement is only for the specific purposes of transferring regulated Underground Storage Tanks as described in RCW 90.76 and WAC 173-360, and is limited to sites that are not contaminated as described in MTCA 70.105D RCW, Uniform Environmental Covenants Act Chapter 64.70 RCW, and MTCA Cleanup Regulations 173-360 WAC.

In Washington State, when properties are acquired by an Indian Nation and become Trust Land the regulatory authority for UST's becomes the US EPA. To better facilitate this transfer the following flow sheet has been developed.

- ✓ Notification – EPA will make a request in writing to Ecology's Toxics Cleanup Program Manager (or appointed staff) to transfer jurisdiction for the UST site to US EPA as it has become trust land.
- ✓ Ecology's Program Manager (or appointed staff, UST/LUST Coordinator) will approve the jurisdictional transfer from State to Federal, and notify the appropriate UST staff to perform the following actions:
  - a. Make a COPY of the UST file in the region and headquarters and furnish them to EPA
  - b. Notate in the Ecology files with a Notice of what date the jurisdictional transfer occurred and make the changes to the UST database to reflect these changes.

Agency transfer date: 7/2015

UST Application updated ☐ Date: \_\_\_\_\_

ISIS updated (If needed) ☐ Date: \_\_\_\_\_

Pdf copy sent to EPA ☐ Date: \_\_\_\_\_

**A COPY OF THE ENTIRE FILE WAS  
SENT TO EPA ON 10/1/97.**



MAY 29 1992

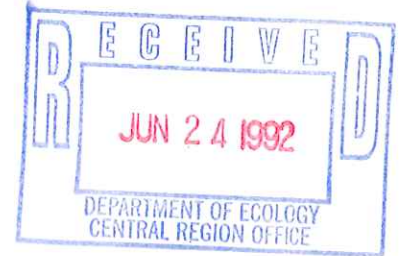
Reply To The  
Attn Of:

WD-139

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Robert Reynolds, Trustee in Bankruptcy for  
R.H. Boyles Co., Inc.  
901 Summit View, Suite 251  
Yakima, Washington 98902

RE: Information Request  
Docket No. 1092-05-12-9005



Dear Mr. Reynolds:


You are hereby served in your capacity as Trustee for R.H. Boyles Co., Inc., with an Information Request pursuant to Section 9005 of the Resource Conservation and Recovery Act (RCRA), as amended, 42 U.S.C. §6991d.

Section 9005 of RCRA authorizes the United States Environmental Protection Agency (EPA) to request from any owner or operator of an underground storage tank (UST) information relating to such tanks.

This Information Request requires that R.H. Boyles Co., Inc., provide timely and adequate answers to all of the questions set forth therein. EPA also requires that a representative of the R.H. Boyles Co., Inc., certify with the enclosed affidavit that the responses are true, accurate and complete. A response must be provided within 14 days of receipt of this Information Request.

If you have any questions regarding this matter, please call Todd Bender of the Regional Underground Storage Tank Program, at (206) 553-0344 for technical matters, or Deborah Hilsman of the Office of Regional Counsel, at (206) 553-1810 for legal matters.

Sincerely,

  
Charles E. Findley  
Director, Water Division

Enclosures: Information Request  
Affidavit  
40 C.F.R. Part 280

cc: WDOE, Central Region, Yakima

1  
2  
3  
4  
5 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
6 Region 10  
7 1200 Sixth Avenue  
8 Seattle, Washington 98101

9 IN THE MATTER OF: )

10 R.H. Boyles Co., Inc. )  
(BRAND X Facility in )  
11 Toppenish, WA) )

Docket No. 1092-05-12-9005

INFORMATION REQUEST

Respondent )

12  
13 Pursuant to Section 9005 of the Resource Conservation and  
14 Recovery Act, as amended (RCRA), 42 U.S.C. Section 6991d, the  
15 Environmental Protection Agency (EPA), through the Director of  
16 the Water Division, and upon the basis of available information,  
17 hereby issues this Information Request:

18  
19 BACKGROUND INFORMATION

20 1. Brand X Tank and Tummy (Brand X), owned by R.H. Boyles  
21 Co., Inc. (Respondent) and operated as a petroleum bulk storage  
22 and retail plant is located within the confines of the Yakima  
23 Reservation on the southwest corner of Fort Road and Elm Street,  
24 in Toppenish, Washington.

25 2. Two or more underground storage tanks (USTs) are (or  
26 have been) located at this Brand X facility.

27 3. R. H. Boyles Co., Inc., is the owner of USTs as those  
28 terms are defined under Sections 9001 and 9002 of RCRA.

1 4. Owners and operators of USTs located on Indian Lands  
2 were required to notify the EPA, as the implementing agency, of  
3 their existence if the UST systems were either in operation on or  
4 after May 8, 1986, or taken out of operation and managed in place  
5 subsequent to January 1, 1974.

6 5. EPA, Region 10, has not to date received notification  
7 for the USTs at this Brand X facility.

8 6. Owners and operators of USTs are required to provide a  
9 method or combination of methods of release detection for their  
10 USTs by the applicable date established in the schedule set forth  
11 in 40 C.F.R. Sections 280.40-45 (see enclosed schedule of  
12 compliance dates).

13 7. EPA, Region 10, has reason to suspect that petroleum  
14 releases have occurred from the USTs at this Brand X facility.

15 8. Owners and/or operators of petroleum or hazardous  
16 substance USTs which have created a release to the surface or  
17 subsurface environment must comply with the release response  
18 requirements set forth in 40 C.F.R. §280.50 - §280.65.

19  
20 INFORMATION REQUEST

21 9. For purposes of responding to this Information Request,  
22 the following definitions apply.

23 The term "underground storage tank" means any one or  
24 combination of tanks (including underground pipes connected  
25 thereto) which is used to contain an accumulation of  
26 regulated substances, and the volume of which (including the  
27 volume of the underground pipes connected thereto) is 10  
28 percent or more beneath the surface of the ground.

1           The term "regulated substance" means (a) any substance  
2 defined in Section 101(14) of the Comprehensive  
3 Environmental Response, Compensation, and Liability Act of  
4 1980 (but not including any substance regulated as a  
5 hazardous waste under Subtitle C), and (b) petroleum,  
6 including crude oil or any fraction thereof which is liquid  
7 at standard conditions of temperature and pressure.

8           The term "owner" means in the case of an underground  
9 storage tank in use on the date of enactment of the  
10 Hazardous and Solid Waste Amendments of 1984, or brought  
11 into use after that date, any person who owns an underground  
12 storage tank used for the storage, use, or dispensing of  
13 regulated substances.

14           The term "operator" means any person in control of, or  
15 having responsibility for, the daily operation of the UST  
16 system.

17           The term "release" means any spilling, leaking,  
18 emitting, discharging, escaping, leaching or disposing from  
19 an UST into ground water, surface water or subsurface soils.

20       10. Pursuant to the authority of Section 9005 of RCRA, 42  
21 U.S.C. §6991d, Respondent shall, **within fourteen (14) days** of  
22 receipt of this Information Request, provide copies of any and  
23 all existing documents requested below, and/or complete and  
24 accurate responses to the questions set forth below.

25       (a) Provide the date of purchase by the current owner, and  
26 the names and addresses of the current and previous  
27 owners, of the facility. Provide the same information  
28 (dates and addresses) for current and previous

1 operators.

2 (b) Provide copies of any and all notification(s) submitted  
3 to EPA, the implementing agency, of the existence of  
4 any and all underground storage tanks operated at this  
5 facility. If notifications were submitted to the  
6 Washington Department of Ecology in error, provide  
7 copies of such notifications.

8 (c) Indicate the number, size, age, type, location, uses,  
9 and dates of use, of any and all USTs at this facility.

10 (d) Provide a description of the contents of each UST at  
11 this facility. This description should, at a minimum,  
12 specify the type and quantity of product that was, or  
13 is now, stored in any and all USTs at this facility.

14 (e) Provide documentation of compliance with the release  
15 detection requirements for tank(s) set forth at 40  
16 C.F.R. §§ 280.41 and 280.43 for each UST Installed  
17 prior to 1975, or for which the date of installation is  
18 unknown, by providing either:

19 (1) proof of purchase and installation of an  
20 automatic tank gauging system, vapor monitoring  
21 system, groundwater monitoring system or  
22 interstitial monitoring system; or

23 (2) documentation of an annual tank tightness  
24 test and daily inventory records for January 1991  
25 through the present, if the daily inventory  
26 control method of leak detection is used.

27 (f) Provide documentation of compliance with the release  
28 detection requirements for piping set forth at 40

1 C.F.R. §§ 280.41 and .44 by providing:

2 FOR ALL PRESSURIZED PIPING:

3 (1) Receipts for purchase and installation of an  
4 automatic line leak detector; and

5 (2) Results from an annual line tightness test or  
6 results from a monthly monitoring program.

7 FOR ALL SUCTION PIPING:

8 Documentation of either

9 (1) a line tightness test; or

10 (2) use of monthly monitoring method conducted in  
11 accordance with § 280.44(c); or

12 (3) evidence that the facility's suction piping  
13 meets the standards outlined in § 280.41(b)(2) (i  
14 through v), and, therefore, no release detection  
15 is required.

16 (g) If, for any reason a release was suspected from any UST  
17 system at this facility, provide documentation of  
18 compliance with the release reporting, investigation  
19 and confirmation requirements set forth in 40 C.F.R.  
20 Part 280, Subpart E. Such documentation must include  
21 the results of a system test and a site check conducted  
22 in accordance with 40 C.F.R. § 280.52.

23 (h) If the system test and/or site check indicated a  
24 release has occurred from the USTs at this facility, or  
25 if a release from the USTs has been identified in any  
26 other manner, then provide documentation of compliance  
27 with the release response and corrective action  
28 requirements set forth in 40 C.F.R. Part 280,

1 Subpart F. Such documentation must include:

2 (1) A description of the initial response steps  
3 taken to prevent further release of regulated  
4 substances and to mitigate fire, explosion and  
5 vapor hazards pursuant to 40 C.F.R. §280.61, and  
6 the dates such steps were taken;

7 (2) A copy of the report submitted to EPA  
8 summarizing the initial abatement steps taken as  
9 required by 40 C.F.R. §280.62. If no such report  
10 has been submitted, then provide a description of  
11 initial abatement measures conducted in response  
12 to the confirmed release pursuant to 40 C.F.R.  
13 §280.62;

14 (3) Information concerning the initial site  
15 characterization including:

16 (a) Data on the nature and estimated  
17 quantity of release;

18 (b) Data on the use and approximate  
19 locations of wells potentially affected  
20 by the release;

21 (c) Description of subsurface soil  
22 conditions; and

23 (d) Locations of subsurface sewers.

24 (4) Assessment of potential existence of free  
25 product phase contamination and plans for  
26 immediate removal of such contamination, including  
27 a detailed description of the remediation process;

28 (5) Assessment of volume and extent of

1 contaminated soils, including a detailed  
2 description of the remediation process; and  
3 (6) A complete description of the hydrogeologic  
4 characteristics of the impacted area to all  
5 surrounding hydrogeologic divides.

6 (i) Submit any and all information regarding any petroleum  
7 release at this facility, including, but not limited to  
8 any reports of discovery of release, and/or  
9 confirmation of release.

10 (j) Provide copies of any and all information available  
11 regarding soil and/or ground water testing performed at  
12 this facility.

13 (k) Indicate whether any petroleum contamination has been  
14 observed either in the soils or in/on the ground water  
15 at this facility.

16 (l) Provide any and all documentation pertaining to the  
17 taking out of operation of any or all underground  
18 storage tanks or piping located at this facility,  
19 including, but not limited to: copies of any  
20 notification submitted to EPA, the implementing agency,  
21 or Washington State Department of Ecology of intent to  
22 permanently close the underground storage tanks or  
23 piping; copies of any records capable of demonstrating  
24 that a site assessment has been performed; and copies  
25 of any closure records filed.

26 (m) Submit an outline of the procedures that were employed  
27 in permanently closing any and all existing tanks and  
28 piping pursuant to 40 C.F.R. § 280.71 through 280.74.

SUBMISSION OF INFORMATION

11. Failure to provide a timely response to this Information Request may subject Respondent to further action, including the filing of an administrative complaint which could result in liability of up to \$10,000 per tank for each day of continued noncompliance pursuant to Section 9006 of RCRA.

12. Respondent shall submit the information required in this Information Request to:

Director, Water Division  
U.S. Environmental Protection Agency  
1200 Sixth Avenue  
Seattle, Washington 98101  
Attn: Todd Bender, WD-139

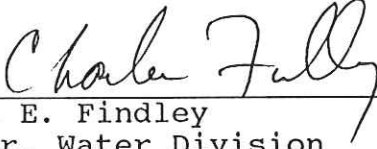
13. Even if there is full compliance with this Information Request, Respondent shall not be relieved from liability to pay civil penalties or be subject to injunctive relief for any past or future violations of the Resource Conservation and Recovery Act, as amended, and its implementing regulations.

14. You are entitled to assert a claim of business confidentiality covering any part of the submitted information in the manner described in 40 C.F.R. Part 2, Subpart B. Information subject to a claim of business confidentiality will be made available to the public only in accordance with the procedures set forth in 40 C.F.R. Part 2, Subpart B. Unless a business confidentiality claim is asserted at the time the information is submitted, EPA may make such information available to the public without further notice to you.

1 15. Questions concerning this Information Request should be  
2 addressed to Todd Bender, of the Regional Underground Storage  
3 Tank Program, at (206) 553-0344 for technical matters, or Deborah  
4 Hilsman, Office of Regional Counsel, at (206) 553-1810 for legal  
5 matters.

6  
7  
8  
9 DATED this 29<sup>th</sup> day of May, 1992.

10  
11 U.S. Environmental Protection Agency

12   
13 \_\_\_\_\_  
14 Charles E. Findley  
15 Director, Water Division  
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2  
3 UNITED STATES  
4 ENVIRONMENTAL PROTECTION AGENCY  
5 REGION 10

6 IN THE MATTER OF:

7 R.H. Boyles Co., Inc.  
8 (BRAND X Facility in  
9 Toppenish, WA)

10 Respondent

)  
)  
) Docket No. 1092-05-12-9005  
)  
)

) AFFIDAVIT REGARDING  
) INFORMATION REQUEST  
)  
)

11 I, \_\_\_\_\_, being first duly sworn,  
12 hereby certify that the enclosed response to the above captioned  
13 Information Request is true, accurate, and complete. As for the  
14 portions of this response for which I cannot personally verify  
15 the truth and accuracy, I certify, as the Company Official having  
16 supervisory responsibility for the person(s) who, acting under my  
17 instructions, made the verification, that this information is  
18 true, accurate, and complete.  
19

20 Dated: \_\_\_\_\_ Signature: \_\_\_\_\_

21 Printed Name: \_\_\_\_\_

22 SUBSCRIBED and SWORN to before me this \_\_\_\_\_ day of

23 \_\_\_\_\_, 1992.  
24

25 NOTARY PUBLIC in and for the  
26 State of \_\_\_\_\_  
27 residing at \_\_\_\_\_  
28 My Commission expires \_\_\_\_\_

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U5857

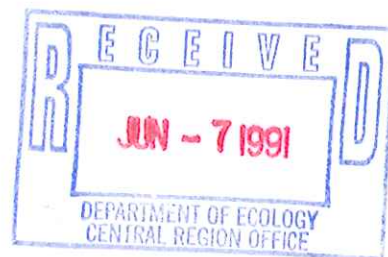
DEPARTMENT OF ECOLOGY  
UNDERGROUND STORAGE TANKS

MAY 30 1991

SITE ASSESSMENT REPORT FOR  
UNDERGROUND STORAGE TANK CLOSURE  
AT BRAND X TANK & TUMMY  
TOPPENISH, WA

For:

Gary Christensen  
R. E. Powell Distributing, Inc.  
501 East Main  
Grandview, WA



By:

David L. Green, R.S.A.  
Engineering Geologist

WHITE SHIELD, INC.  
P.O. Box 477  
Grandview, WA 98930

May, 1991



# WHITE SHIELD, INC.

P.O. BOX 477 • GRANDVIEW, WA 98930 • (509) 882-1144  
FAX (509) 882-4566



May 23, 1991

R. E. Powell Distributing, Inc.  
501 East Main  
Grandview, WA 98930

Attention: Gary Christensen

SUBJECT: SITE ASSESSMENT REPORT FOR CLOSURE OF UNDERGROUND  
STORAGE TANKS.

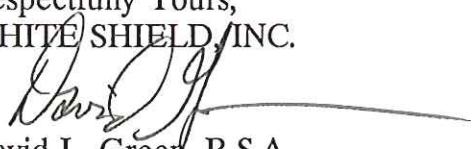
Dear Mr. Christensen,

Please find two copies of the exploratory investigation report as you requested. Based on the data and findings reported herein, we have determined that the groundwater is contaminated with gasoline at the southeast corner of the property. Although diesel was found in the groundwater across Elm Street, it is not likely to have originated from the same source as that found on the Brand-X property.

The Washington State Department of Ecology (DOE) requires that you retain this report for a minimum of ten years. We recommend you retain it indefinitely. The DOE also requires the property owner to report a spill of this nature within 24 hours. We have also provided a cost estimate for cleanup of the property. However, since the exact nature of the plume is unknown, this estimate is approximate.

We appreciate the opportunity to provide you technical assistance for your tank closure. Please call me at (509) 882-1144 should you have any questions or comments.

Respectfully Yours,  
WHITE SHIELD, INC.

  
David L. Green, R.S.A.  
Engineering Geologist

Project Number: REP-0191

cc: lb  
Pat Perrault

## **Brand - X, Toppenish, WA**

### **Executive Summary**

White Shield, Inc. (WSI) provided exploratory investigation services at the Brand - X Tank & Tummy, Toppenish, WA. We tested the soil and groundwater for petroleum contamination following sample collection protocol as required by the Guidance for Site Checks and Site Assessments for Underground Storage Tanks. We completed our investigation on May 22, 1991. Based on our visual observations, analytical laboratory analyses, olfactory responses (smell), and interviews, we find petroleum contaminated soil and groundwater within the southeastern portion of the property. We also found petroleum contamination in the area of pit 1 that slightly exceeds cleanup guidelines.

The southeastern portion of the property contains the majority of petroleum contamination. We constructed two test pits on the opposite side of Elm Street and found that the groundwater is contaminated with diesel. It is unknown whether or not the diesel contamination originates from the assessed property. This can be ascertained during removal of lines and underground tanks at the Brand-X site. If it is determined that this contamination originates from the Brand-X property, extraction wells and a portable groundwater treatment unit is recommended for this area.

The soil and groundwater that is also contaminated in the southeastern portion of the property requires treatment. We estimate 2,500 to 3,000 cubic yards of soil must be removed from the area of pit 1 and pit 3. This should be treated by "landfarming". The contaminated groundwater must also be removed and treated utilizing air-stripping and/or activated carbon techniques. The extent of this treatment process will depend on many factors, but at this point, we estimate that a one-year air-stripping program will be necessary. Continuous monitoring of at least three monitoring wells will be required.

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**Brand - X, Toppenish, WA**

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## **Brand - X, Toppenish, WA**

### **1.1 Purpose**

This report describes findings and actions taken for work associated with the exploratory investigation at the Brand-X property. The purpose of our investigation involved determination of the presence or absence of petroleum contamination and a rough approximation of the extent groundwater contamination. The work and investigation responds to regulatory requirements set forth by the United States Environmental Protection Agency (EPA) and the State of Washington, Department of Ecology (DOE).

### **1.2 Scope of Work**

This report completes exploratory investigation services, provided by White Shield, Inc. (WSI), for determination of the presence or absence of significant petroleum contamination at the Brand-X in Toppenish, Washington. Upon discovery of contaminated groundwater, we expanded the scope of work to include an approximate determination as to the extent of contamination and cost for remediation of the affected area.

## **2.0 Background Information**

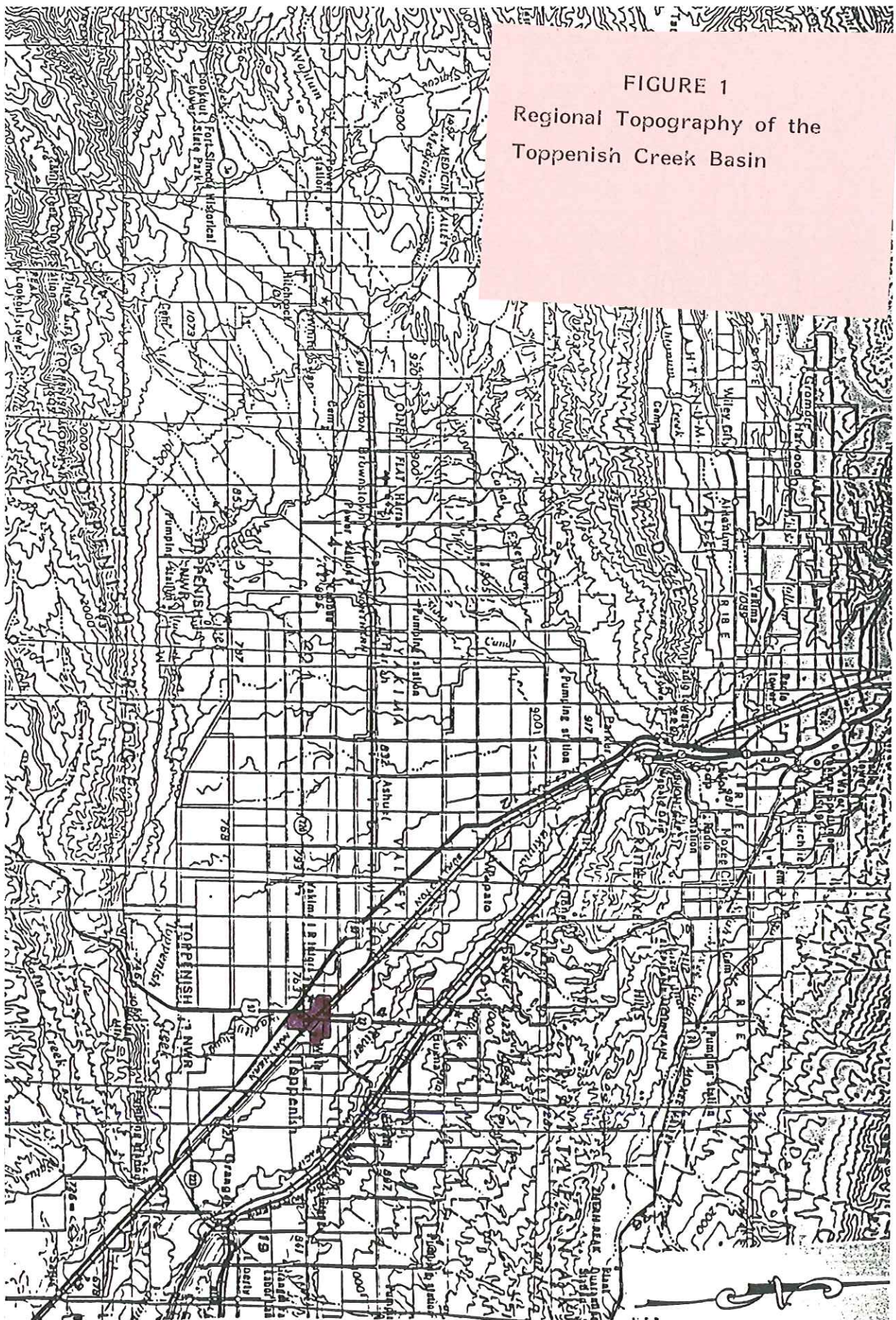
### **2.1 Site Location and Topography**

Toppenish is located within the southeast portion of the Toppenish Creek Basin (see Figure 1). The local topography dips very gently to the southeast following the Yakima River drainage. The Yakima River is approximately 2 miles northeast of the site and flows southeasterly to the Columbia River.

The Toppenish Creek Basin is bounded by Toppenish Ridge to the south, the Cascade Range to the west, and Ahtanum Ridge with Rattlesnake Ridge to the north. The topographic basin is divided by the Yakima River into two separate drainage areas.

The local topography slopes gently to the southeast, roughly paralleling the Yakima River.

FIGURE 1  
Regional Topography of the  
Toppenish Creek Basin



## **Brand - X, Toppenish, WA**

The site is located in the southwest portion of the town (see Figure 2), on the southwest corner of Elm Street and Fort Road, Toppenish, WA. It is located within the NE 1/4, NE 1/4, NW 1/4, NE 1/4, Section 9, Township 10 North, Range 20 East, Willamette Meridian. The surrounding area consists of commercial businesses, of which three adjacent properties operate underground storage tanks.

### **2.2 Site Description and History**

The property operates as a bulk plant for distribution of petroleum products, a car wash and mini-mart which retails petroleum products. The western portion of the property consists of a bulk plant with five above ground storage tanks and fuel dispensers (truck rack). Immediately east of the above ground tanks are two abandoned underground tanks of unknown size. As indicated by the distance between fill spouts, the tanks are probably about 1,500 gallons each.

The western portion of the property is occupied by a small mini-mart with a car wash attached to the southern portion of the building. Two 6,000 gallon tanks, containing regular and unleaded gasoline lie north of the building. Two 4,000 gallon tanks, containing regular and super unleaded gasoline lie east of the car wash. The retail dispensers are located north and east of the building. All tanks remain in place but are unused.

### **2.3 Regional Geology**

The ridges surrounding the Toppenish Creek Basin (discussed above) are composed of Columbia River Basalts and interbedded sediments of the Ellensburg Formation. The rocks of this region reflect a history of north-south compressional forces. These forces produced geologic structures (ridges and valleys) which affect surface and groundwater hydrology in areas adjacent to the river valley. An east-west trending anticline (ridge resulting from folding) lies approximately 18 miles north of the site. This anticline is structurally continuous, but has been geographically divided into Ahtanum Ridge and Rattlesnake Ridge. Union Gap separates these ridges. The foothills of the Cascade Range trend roughly north-south and lie approximately 25 miles west of the property. Toppenish Ridge trends roughly east-west and is located approximately 5 miles southwest of the property.



FIGURE 2  
Steet Map of Toppenish

## **Brand - X, Toppenish, WA**

### **2.4 Site Geology**

The property is situated upon deposits consisting of Yakima River flood silts (clayey, sandy silt in the upper 4-5 feet). This flood silt was deposited during periods when the Yakima River flooded over the area.

Mainstream Yakima River gravels underlie the silt and extend to depths over 14 feet deep. These gravels were deposited when the Yakima river ran over the property. Over time, the Yakima River has meandered extensively over much of the eastern portion of the Toppenish Creek Basin.

The river deposit consists mainly of basaltic and andesitic cobbles and gravels up to 6 inches in diameter. The average size is approximately 2 inches in diameter. In the test pits we established (discussed below), there is no significant variance in particle size within the gravels.

### **2.5 Hydrology**

The major drainage features for this portion of the basin include Toppenish Ridge, the Cascade foothills, Ahtanum Ridge and the Yakima River. As mentioned in section 2.1, the land slopes very gently to the southeast paralleling the Yakima River. The nearest surface water, Wanity Slough, lies approximately 1/4 mile southwest of the site.

Groundwater is contained by an alluvial aquifer and deep basalt aquifers. The groundwater surface within the alluvial aquifer lies at a depth of about 13 feet at the site. We conducted a review of driller well logs registered with the WSDOE and records of City Wells held by the Toppenish Public Works Department. Our review finds that the general groundwater flow is toward the southeast. However, the exact direction of groundwater flow at the site is difficult to determine due to the lack of sufficient data. The nearest public water supply well is located approximately 1/5 mile from the site.

## **Brand - X, Toppenish, WA**

### **3.0 Field Activities**

#### **3.1 General Investigative Methods**

We visually inspected the soil and groundwater by establishing test pits in areas most likely to be contaminated. We used field screening, analytical laboratory analyses, olfactory responses (smell), and interviews for data. The methods and general conclusions are discussed below.

#### **3.2 Exploratory Investigation**

David L. Green, an engineering geologist registered with the Washington State Department of Ecology Underground Storage Tank Program, performed the investigation on May 6 and 23, 1991. The exploration began by establishing three test pits in areas most likely to exhibit contamination by petroleum products. These initial pits were established downgradient from Underground Storage Tanks and one of the dispenser islands. We sampled according to Guidelines for Site Checks and Site Assessments for Underground Storage Tanks (February, 1991). The attached Field Form for Site Assessment of Underground Storage Tanks (Field Form) provides a site map and other key data and is included as Appendix A. We detected petroleum odors and visual signs of contamination in pit 3 (see Field Form). We submitted 6 samples to Materials Testing and Consulting, Mt. Vernon, Washington for laboratory analysis and found that petroleum hydrocarbon concentrations are above action levels established by the WSDOE in pit 1 and pit 3. Since contaminant levels were extremely high in pit 3 we established two additional test pits on the Serve-Um-Yourself property located across Elm Street. We found diesel with a concentration of 8.0 ppm in pit 4. Due to the absence of gasoline in this pit, it is unlikely that it is associated with contamination found in pit 3. These sample locations are shown on the Field Form and the analysis results are shown in Appendix B. As required by the DOE, we have completed the Underground Storage Tank Site Check/Site Assessment Checklist and submitted it to the Olympia office. A copy of this checklist is presented in this report as Appendix D.

**Brand - X, Toppenish, WA**

**4.0 Investigative Methods and Results**

**4.1 Field Screening**

For field analysis of compounds containing volatile organics, we use a Foxboro Organic Vapor Analyzer in conjunction with the interim headspace method as recommended by the manufacturer. This method is used to confirm the presence or absence of volatile components in the soil and provides only a rough indication of the contaminant concentrations. The analysis procedure involves:

1. Selecting a clean, wide mouth jar (1 qt.) and filling the bottom 1/3 with a discrete soil sample.
2. Place aluminum foil over the top of the jar and place a ring over the jar to create a seal.
3. Boil the sample for 10 minutes. This causes the volatile compounds to become vapors and collect in the space above the soil.
4. Remove the sample from the boiling water and insert the instrument probe through the aluminum foil for vapor analysis.
5. Record the instrument response on the FF.

**4.2 Soil Sampling**

The FF presents the location, quantity and types of samples taken. In general, sample collection and control followed the following protocol:

1. Select a laboratory certified clean sample jar for sample collection.
2. Using clean latex gloves and clean sampling utensils (tri-sodium phosphate, chlorine solution, tap water rinse and distilled water rinse cycle) tightly pack the soil sample in the sample jar (4 oz.) to the top of the jar to prevent any airspace.
3. Label the jar with the soil sample number, the type of laboratory test required, the date, name of site and sampler. The sample is then entered on the chain of custody form.

**Exploratory Investigation - May, 1991**

**Brand - X, Toppenish, WA**

4. Cool the sample in wet ice to approximately 40 C.
5. Repack the samples for shipment to the laboratory in blue ice and a cooler.
6. Relinquish sample to courier for shipment to the laboratory.

**4.3 Soil Chemistry**

To determine if soil cleanup is required, we compare laboratory analysis results to Action Levels for Petroleum Releases (Action Levels). These levels (Appendix C) are established in Guidelines for Site Checks and Site Assessments for Underground Storage Tanks.

Based on our comparison, we find that cleanup of Petroleum Contaminated Soil (PCS) is necessary in the area of pit 1 and pit 3 shown on the Field Form (Appendix A).

**Pit 1**

The soil sample collected in pit 1, at a depth of 8 feet, indicates the presence of:

gasoline at a concentration of 95 parts per million (ppm),  
benzene at a concentration of 7 parts per billion (ppb),  
toluene at a concentration of 1,550 ppb (1.55 ppm),  
ethylbenzene at a concentration of 1,690 ppb (1.69 ppm),  
xylenes at a concentration of 28,400 ppb (28.4 ppm).

Comparison of analysis results with Action Levels for Petroleum Releases (Appendix C) indicates that cleanup of Petroleum Contaminated Soil is required due to the concentration of xylene in the soil. Also, the concentration of gasoline is very near the Action Level. It is likely that concentrations of gasoline exceed Action Levels nearer to the tanks.

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### **Pit 2**

The soil sample collected in pit 2, at a depth of 7 feet, found no detectable petroleum products. No cleanup action is required at this location.

### **Pit 3**

The soil sample collected in pit 3, at a depth of 7 feet, indicates the presence of:

gasoline at a concentration of 180.0 ppm,  
benzene at a concentration of 5.0 ppb (0.005 ppm),  
toluene at a concentration of 9,160 ppb (9.16 ppm),  
ethylbenzene at a concentration of 1,280 ppb (1.28 ppm) and  
xylenes at a concentration of 35,500 ppb (35.5 ppm).

Comparison of analysis results with Action Levels for Petroleum Releases (Appendix C) indicates that cleanup of Petroleum Contaminated Soil is required due to the concentration of gasoline and xylenes in the soil.

### **Pit 4 & 5**

No soil samples were collected from pit 4 or pit 5 due to budget constraints. These pits were established to allow sampling of the groundwater. Analysis of these samples are discussed in section 4.5, Groundwater Chemistry.

Results of soil sample analyses are shown in Appendix B. Comparison of the analyses results with the action levels for cleanup (Appendix C) indicates that cleanup action is required in the area of pit 1 and pit 3.

## **4.4 Groundwater Sampling**

Water sampling followed the same general protocol as the soil samples. However, food grade Mason jars were used to collect the sample. The primary difference lies in filling the sample bottle. We filled the water bottle, placed the cap on the sample and inverted the sample to confirm the absence of air space.

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**4.5 Groundwater Chemistry**

To determine if groundwater cleanup is required, we again compare laboratory analysis results to Action Levels for Petroleum Releases (Action Levels). These levels (Appendix C) are established in Guidelines for Site Checks and Site Assessments for Underground Storage Tanks.

Based on our comparison, we find that cleanup of Petroleum Contaminated Groundwater (PCG) is necessary in the area of pit 3 and pit 4, the locations of which are shown on the Field Form (Appendix A).

**Pit 1**

Laboratory analysis of the groundwater sample collected from pit 1 indicates the presence of:

gasoline at a concentration of 0.05 ppm,  
toluene at a concentration of 2.0 ppb (0.002 ppm),  
ethylbenzene at a concentration of 1.0 ppb (0.001 ppm)  
Xylenes at a concentration of 9 ppb (0.009 ppm).

Benzene was not detected in the analysis. Comparison of analysis results with the Action Levels indicate that cleanup is not required at this location. However, petroleum is present and its appearance in the sample may indicate groundwater and/or soil contamination upgradient from this location.

**Pit 2**

Laboratory analysis of the groundwater sample collected in pit 2 found no detectable petroleum contamination.

**Pit 3**

The groundwater sample collected in pit 3 indicates high concentrations of gasoline. At the dilution required to process the sample, gasoline was the only matrix identified. It is likely that high concentrations of benzene, toluene, ethylbenzene and xylenes are also present. Cleanup of petroleum contaminated groundwater at this location is necessary.

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### **Pit 4**

The groundwater sample collected in pit 4 indicates the presence of diesel at a concentration of 8.2 ppm. It also contained lead at a concentration of 0.016 ppb. This sample exceeds Action Levels for diesel. However, if this were associated with the contamination found in pit 3, the presence of gasoline or its components would be expected as it is much more mobile than diesel. It is likely that this is not associated with contamination found in pit 3.

### **Pit 5**

Analysis of the groundwater sample collected in pit 5 found no detectable petroleum contaminants. No cleanup action is required at this location.

Results of the analyses are shown in Appendix B. Comparison of the analyses results with the Guidance for Site Checks and Site Assessments for Underground Storage Tanks indicates that groundwater cleanup is required in pit 3 and pit 4.

## **5.0 Recommendations**

We understand that the underground storage tanks are not currently in use and are not intended for use in the future. We recommend removing the tanks and proceeding with cleanup of the contaminated media.

During the tank removal process, we suggest monitoring excavated soil with an organic vapor analyzer. This will allow separation of contaminated soil from non-contaminated soil during excavation. The contaminated soil should continue to be removed until laboratory analyses indicate that the remaining soil is "clean". Contaminated soil shall stockpiled upon, and covered with a plastic liner to conform with WSDOE requirements.

## **Brand - X, Toppenish, WA**

The most cost effective method of treatment for petroleum contaminated soil (PCS) consists of on-site or off-site land management (landfarming). The WSDOE has specific requirements for this method of treatment. These consist of:

depth to groundwater must be greater than ten feet,  
the surface should be level and protected from surface water and runoff,  
soil containing gasoline shall be spread to a maximum thickness of 6 inches,  
soil containing diesel shall be spread to a maximum thickness of 3 inches,  
the treatment area shall be restricted from public access and  
treatment shall be monitored to ensure treatment progress.

If an adequate treatment site is unavailable, a county landfill will treat the soil if space is available.

Upon excavation of the tanks and removal of contaminated soil, contaminated groundwater should be pumped from the floor of the excavation to remove as much contaminated groundwater as possible. It may be possible to utilize previously excavated tanks for storage of contaminated water if they are in good condition. Removal of contaminated groundwater from the excavation will reduce contaminant concentrations remaining and will reduce in-place treatment and associated costs. The removed contaminated groundwater must be treated through use of air-stripping and/or activated carbon once all free product is removed through gravity separation. If contaminated groundwater remains in-place after pumping an extraction well should be placed within the plume and contaminated groundwater must be pumped and treated by air-stripping and activated carbon until concentrations fall below Action Levels.

Upon removal of contaminated media, and before extraction cleanup is initiated, at least three groundwater monitoring wells should be installed to monitor contaminant concentrations and ensure that contaminants do not migrate from the site.

**Brand - X, Toppenish, WA**

**6.0 Conclusion**

Our investigation reveals that cleanup of petroleum contaminated soil is necessary in the area of pit 1. We also find that cleanup of petroleum contaminated groundwater and soil is necessary in the area of pit 3. It is likely that much of the cleanup can be accomplished during and after removal of the tanks. If it is impossible to remove all contamination through excavation and pumping of the excavated area, installation of a pump and treat system is warranted. A cost estimate for treatment is provided separately.

**7.0 Limitations**

In performing our professional services, we used a degree of care ordinarily exercised under similar circumstances by members of our profession. No warranty, expressed or implied, is made or intended. Our conclusions and recommendations, developed from our field and laboratory investigation reported herein, are based upon this firm's understanding of this particular project and are in concurrence with generally accepted practice.



P.O. BOX 477  
GRANDVIEW, WA  
98930  
(509) 882-1144

# FIELD FORM FOR SITE ASSESSMENT OF UNDERGROUND STORAGE TANKS

Project name: Toppenish Brand-X Project number: REP-0191

Location: SW CORNER of Fort Rd & Elm; 1/4 1/4, Sec.    , T.     N., R.     E., W.M.

Field Personnel: D.L.G. & R.L.H. Weather: Sunny, Warm Date: 5-22-91

Tank Contents:     Size:     Condition:    

Tank Contents:     Size:     Condition:    

Tank Contents:     Size:     Condition:    

Tank Contents:     Size:     Condition:    

Tank Contents:     Size:     Condition:    

Ambient vapors:     Vapors in excavation:     Odors:    

Soil texture and structures: Flood silt to ~6'. Basaltic River Gravels up to 5" in diameter from 6' to 13'

Visual contamination: 2' heavy contamination above g.water in PIT 3 Screening method: FID



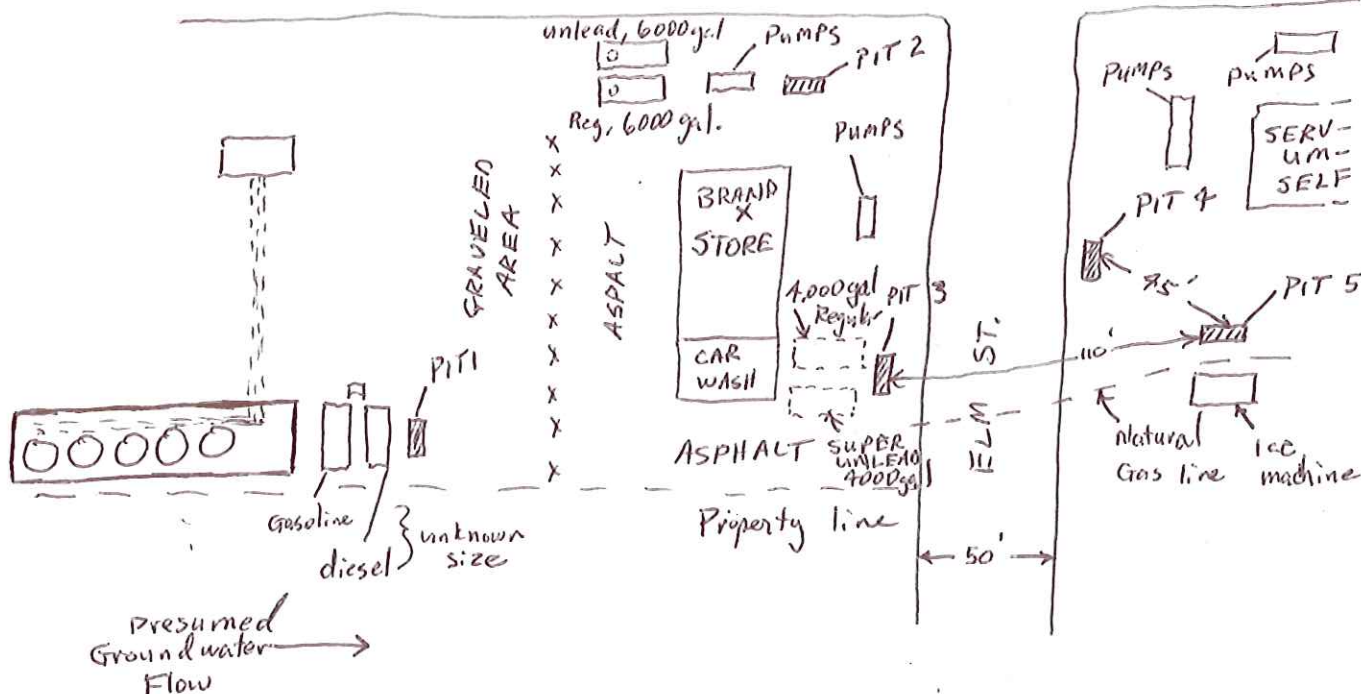
North  
Direction

## SITE SKETCH

(Show tank locations, lines, dispenser(s) and sample locations)  
CHEVRON

7-11

FORT RD.



Samples descriptions are on reverse.

Depth to  
groundwater 13'

Approximate scale: Not to scale

I certify that the work performed and sampling methods used meet regulatory requirements as set forth by the U.S. Environmental Protection Agency and the Washington State Department of Ecology.

Site Assessor: [Signature]

Date: 5-22-91

**MTC***Analytical/Environmental Services***Materials Testing & Consulting, Inc**

P.O. Box 309

Mount Vernon, WA 98273

(206)424-7560 - FAX (206)424-7550

Client: White Shield Inc.  
 P.O. Box 477  
 Grandview, WA 98930

Date: 5/9/91  
 Reference: 91-0123

Attn: Dave Green

Project: Brand X

**Data Report**

Lab Number	Sample Description	ug/gm	ng/gm			
		TPH	Benzene	Toluene	Ethylbenzene	Xylenes
31-91-00506.0S	REP-0191-01	95-G	7	1550	1690	28400
31-91-00507.0W	REP-0191-02	0.05-G	<1	2	1	9
31-91-00508.0S	REP-0191-03	<0.05	<5	<5	<5	<5
31-91-00509.0W	REP-0191-04	<0.01	<1	<1	<1	<1
31-91-00510.1S	REP-0191-05	180-G	5	9160	1280	35500
31-91-00511.0W	REP-0191-06	Gasoline*				
	* At the dilution required to run sample, gasoline was the only matrix identified.					
	Methods:					
	BTEX/TPH SW846 8020/8015 mod.					
	G- Gasoline					
	D- Diesel					
		Boil/Water	Boil/Water	Boil/Water	Boil/Water	Boil/Water
	Method Reporting Limit (MRL)	0.03/0.01	5/1	5/1	5/1	5/1
	Maximum Contamination Levels	100/1	500/5	20000/20	40000/40	20000/20

*Kurt W. Larsen*  
 Kurt W. Larsen  
 Sr. Environmental Chemist

Post-It<sup>®</sup> brand fax transmittal memo 7671 # of pages > 1

To: Debbie	From: Kurt W. Larsen
Co. White Shield	Co. MTC
Dept.	Phone # 424-7560
Fax #	Fax # 424-7550

## Appendix B

MTC

Analytical/Environmental Services

Materials Testing &amp; Consulting, Inc

P.O. Box 309

Mount Vernon, WA 98273

WSDOH Laboratory #46092090

(206)424-7560 - FAX (206)424-7550

31

Client: White Shield Inc.  
P.O. Box 477  
Grandview, WA 98930

Date: 5/24/91  
Reference: 91-0168

Attn: Mr. Dave Green

Project: Toppenish Brand X

## Data Report

Lab Number	Sample Description	ug/gm	ng/gm			
		TPH	Benzene	Toluene	Ethylbenzene	Xylenes
31-91-00598.0W	REP-0191-07	8.2-D	<1	<1	<1	<1
31-91-00599.0W	REP-0191-08	<0.01	<1	<1	<1	<1
Methods:						
BTEX/TPH SW846 8020/8016mod.						
G- Gasoline	D-Diesel	Soil/Water	Soil/Water	Soil/Water	Soil/Water	Soil/Water
Method Reporting Limit (MRL)		0.05/0.01	5/1	5/1	5/1	5/1
Maximum Contamination Levels		100/1	500/5	20000/20	40000/40	20000/20



Kurt W. Larson  
Sr. Environmental Chemist

## Appendix B

MTC

Analytical/Environmental Services

Materials Testing &amp; Consulting, Inc.

P.O. Box 309

Mount Vernon, WA 98273

(206)424-7560 - FAX (206)424-7550

Client: White Shield Inc.

P.O. Box 477

Grandview, WA 98930

Date: 5/24/91

Reference: 91-0168

Attn: Mr. Dave Green

Project: Toppenish Brand X

## Data Report

Lab Number	Sample Description	mg/gm				
		Pb				
31-91-00598.0W	REP-0191-07	0.016				
	Methods:					
	SW846 3050/7421					
	Method Reporting Limit (MRL)	0.005				

L.J. Henderson (Kurt Hansen)  
L.J. Henderson, PhD  
Lab Director

# Appendix B

WHITE SHIELD INC. P. O. BOX 477 GRANDVIEW, WA. 98930 (509) 882-1144 (509) 882-4566 FAX		CHAIN OF CUSTODY PROJECT NAME <u>BRAND-X TOPPENISH</u> PROJECT # <u>REP-0191</u> DESTINATION <u>M.T.C.</u> SAMPLER <u>DAVE GREEN</u> DATE <u>5-23-91</u> TIME <u>7:00</u>	
SAMPLE NUMBER	ANALYSIS REQUESTED		
	8015	802	7421
REP-0191-7	X	X	X
REP-0191-8	X	X	X
<h2>1st PRIORITY</h2> <p>Please fax results 5-24-91 if at all possible</p>			
RELINQUISHED BY (SIGN) <u>[Signature]</u> 1. <u>[Signature]</u> DATE <u>5-23</u> TIME <u>6:20</u>		RELINQUISHED BY (SIGN) <u>[Signature]</u> 3. <u>[Signature]</u> DATE <u>5-23</u> TIME <u>8:30p</u>	
RECEIVED BY (SIGN) <u>[Signature]</u> 2. <u>[Signature]</u> DATE <u>5-23</u> TIME <u>6:40p</u>		RECEIVED BY (SIGN) <u>[Signature]</u> 4. <u>[Signature]</u> DATE <u>5-23</u> TIME <u>6:40p</u>	
METHOD OF SHIPMENT SHIPPED BY (SIGN)		RECEIVED FOR LABORATORY (SIGN) DATE TIME	

## Appendix C

### Action Levels for Petroleum Releases

---

<u>Indicator Constituent</u>	<u>CAS Number<sup>1</sup></u>	<u>Groundwater Action Level</u>	<u>Soil Action Level</u>
Benzene	71-43-2	1 $\mu\text{g/L}$ <sup>2,4</sup>	0.5 mg/kg <sup>3</sup>
Ethylbenzene	100-41-4	30 $\mu\text{g/L}$	20 mg/kg
Toluene	108-88-3	40 $\mu\text{g/L}$	40 mg/kg
Xylene	1330-20-7	20 $\mu\text{g/L}$	20 mg/kg
TPH (gasoline)	---	1,000 $\mu\text{g/L}$	100 mg/kg
TPH (other than gasoline)	---	1,000 $\mu\text{g/L}$	200 mg/kg
Lead	7439-92-1	5.0 $\mu\text{g/L}$	250 mg/kg

---

1 CAS number is the Chemical Abstracting Service number; '---' means no CAS number has been defined for these constituents.

2  $\mu\text{g/L}$  can also be expressed as ppb.

3 mg/kg can also be expressed as ppm.

4 Groundwater quality based criteria (Chapter 173-200 WAC).



P.O. BOX 477  
GRANDVIEW, WA  
98930  
(509) 882-1144

# FIELD FORM FOR SITE ASSESSMENT OF UNDERGROUND STORAGE TANKS

Project name: Toppenish Brand-X Project number: REP-0191

Location: SW CORNER of Fort Rd & Elm; 1/4 1/4 Sec.    , T.     N., R.     E., W.M.

Field Personnel: D.L.G. & R.L.H. Weather: Sunny, Warm Date: 5-22-91

Tank Contents:     Size:     Condition:    

Tank Contents:     Size:     Condition:    

Tank Contents:     Size:     Condition:    

Tank Contents:     Size:     Condition:    

Tank Contents:     Size:     Condition:    

Ambient vapors:     Vapors in excavation:     Odors:    

Soil texture and structures: Flood silt to ~6'. Basaltic River Gravels up to 5" in diameter from 6' to 13'

Visual contamination: 2' heavy contamination above g.w. in PIT 3 Screening method: FID



North  
Direction

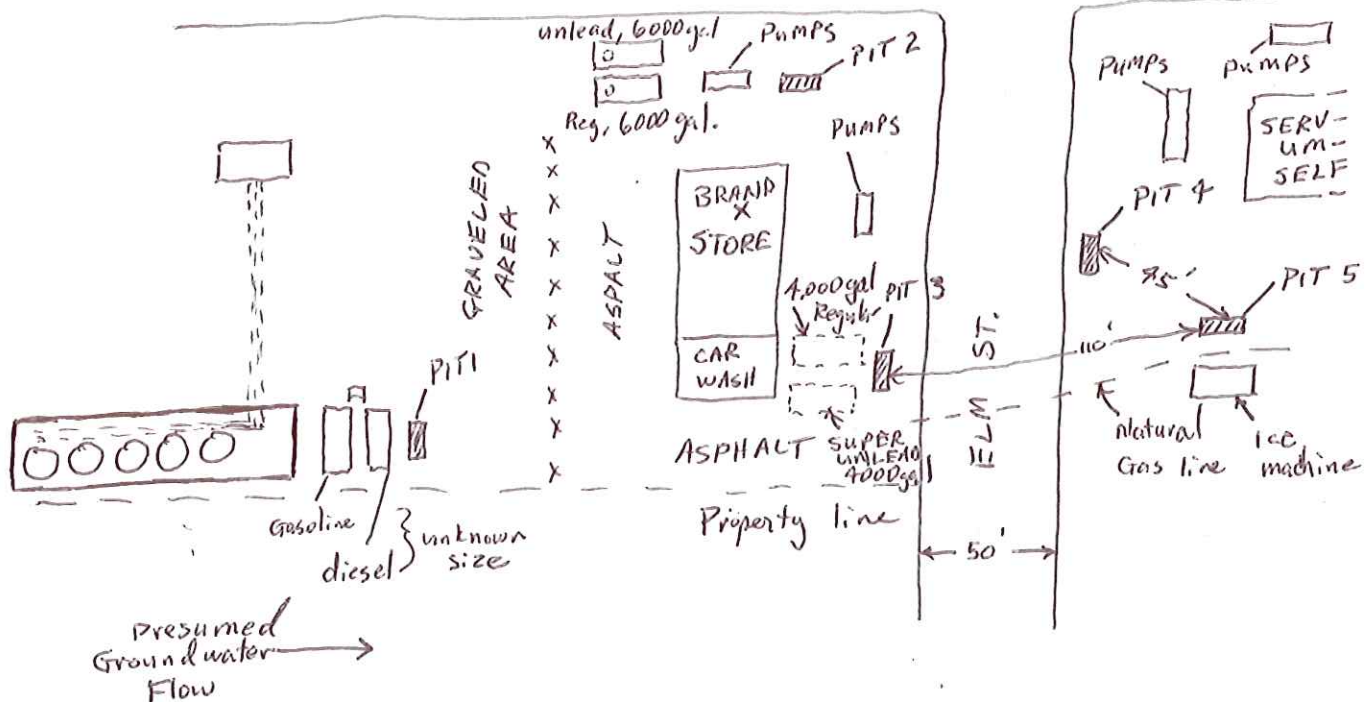
## SITE SKETCH

(Show tank locations, lines, dispenser(s) and sample locations)

CHEVRON

7-11

FORT RD.



Samples descriptions are on reverse.

Depth to  
groundwater 13'

Approximate scale: Not to scale

I certify that the work performed and sampling methods used meet regulatory requirements as set forth by the U.S. Environmental Protection Agency and the Washington State Department of Ecology.

Site Assessor: [Signature]

Date: 5-22-91

REQUIRED SAMPLES

Display locations on site sketch

- ☐ Dispenser 1 (two feet below pipe).

Analysis: \_\_\_\_\_ Depth: \_\_\_\_\_.

Headspace reading \_\_\_\_\_ ppm.

If there is more than one dispenser, include corresponding samples under Additional Sampling

- ☐ Fuel lines (first 50 feet of length).

Analysis: \_\_\_\_\_ Depth: \_\_\_\_\_.

Headspace reading \_\_\_\_\_ ppm.

If there is more than 50' of lines, include corresponding samples under Additional Sampling

ADDITIONAL SAMPLING

- ① PIT 1 - soil

Analysis: \_\_\_\_\_ Depth: 8'Headspace reading 2.2 ppm.

- ② PIT 1 - water

Analysis: \_\_\_\_\_ Depth: 13'Headspace reading No detect ppm.

- ③ PIT 2 - Soil

Analysis: \_\_\_\_\_ Depth: 10'Headspace reading 1.0 ppm.

- ④ PIT 2 - water

Analysis: \_\_\_\_\_ Depth: 13'Headspace reading 0.4 ppm.

- ⑤ PIT 3 - soil

Analysis: \_\_\_\_\_ Depth: 7'Headspace reading no detect ppm.

- ⑥ PIT 3 - water

Analysis: \_\_\_\_\_ Depth: 13'Headspace reading > 1000.0 ppm.

- ⑦ PIT 4 - water

Analysis: \_\_\_\_\_ Depth: 13'Headspace reading 45.0 ppm.

- ⑧ PIT 5 - water

Analysis: \_\_\_\_\_ Depth: 13'Headspace reading No Detect ppm.

- ☐ \_\_\_\_\_

Analysis: \_\_\_\_\_ Depth: \_\_\_\_\_.

Headspace reading \_\_\_\_\_ ppm.

- ☐ \_\_\_\_\_

Analysis: \_\_\_\_\_ Depth: \_\_\_\_\_.

Headspace reading \_\_\_\_\_ ppm.

- ☐ \_\_\_\_\_

Analysis: \_\_\_\_\_ Depth: \_\_\_\_\_.

Headspace reading \_\_\_\_\_ ppm.

- ☐ \_\_\_\_\_

Analysis: \_\_\_\_\_ Depth: \_\_\_\_\_.

Headspace reading \_\_\_\_\_ ppm.

- ☐ \_\_\_\_\_

Analysis: \_\_\_\_\_ Depth: \_\_\_\_\_.

Headspace reading \_\_\_\_\_ ppm.

- ☐ \_\_\_\_\_

Analysis: \_\_\_\_\_ Depth: \_\_\_\_\_.

Headspace reading \_\_\_\_\_ ppm.

- ☐ \_\_\_\_\_

Analysis: \_\_\_\_\_ Depth: \_\_\_\_\_.

Headspace reading \_\_\_\_\_ ppm.

- ☐ \_\_\_\_\_

Analysis: \_\_\_\_\_ Depth: \_\_\_\_\_.

Headspace reading \_\_\_\_\_ ppm.

- ☐ \_\_\_\_\_

Analysis: \_\_\_\_\_ Depth: \_\_\_\_\_.

Headspace reading \_\_\_\_\_ ppm.

- ☐ \_\_\_\_\_

Analysis: \_\_\_\_\_ Depth: \_\_\_\_\_.

Headspace reading \_\_\_\_\_ ppm.

- ☐ \_\_\_\_\_

Analysis: \_\_\_\_\_ Depth: \_\_\_\_\_.

Headspace reading \_\_\_\_\_ ppm.

- ☐ \_\_\_\_\_

Analysis: \_\_\_\_\_ Depth: \_\_\_\_\_.

Headspace reading \_\_\_\_\_ ppm.